

PhRMA

Benefit and Risk The Balance in Developing Innovative Medicines

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Benefit & Risk: developing innovative medicines

■ Pharmaceutical companies' mission

- To continue developing innovative medicines to save lives, to prevent, cure, or manage diseases, to relieve pain/suffering, and to improve quality of life
- To bring these products to market with an established safety profile at a reasonable level of certainty acceptable by the FDA and the general medical community

■ Consensus of patients, physicians, regulators, and industry to bring maximal benefits with minimal risks

■ All medicines have some risk - how to strike the balance?

Benefit & Risk: principles of risk management

What is risk management and assessment?

- Different definitions are used by regulators, industry, and academia
 - **Pre-marketing** can be defined as *risk detection* and *risk assessment or evaluation*
 - **Post-marketing** can be defined as *risk detection, assessment, evaluation AND risk communication and risk minimization*
 - Risk management begins well before product approval
 - Entire spectrum of 'risk management' activities span the life of the drug

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Benefit & Risk: principles of risk management

Analogy: good benefit/risk management like household budget

■ Household budget

- **No planning ahead - surprises occur**
 - Greater risk for cost overruns
 - Can be costly and painful to manage cost overruns (refinancing debt, home equity loans, austere budgeting, credit card management, etc.)
- **Planning ahead - minimal surprises**
 - Lesser risk for budget overruns
 - When cost overruns occur, tend to be lesser in magnitude and easier to manage

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Benefit & Risk: principles of risk management

Analogy: good benefit/risk management like household budget

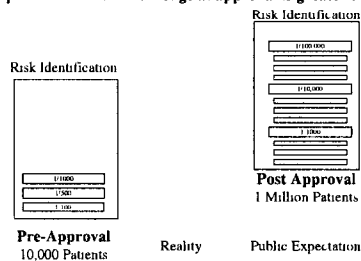
■ Risk management

- **No planning ahead - surprises occur**
 - Greater risk for unanticipated safety issues to arise
 - Difficult to manage (labeling changes, mandated studies, restricted use, product withdrawal)
- **Planning ahead - minimal surprises**
 - Proactive studies carried up front
 - Signals from clinical trials are followed up and quantified
 - Proactive design of post-marketing surveillance studies
 - Safety issues minimized and easier to manage

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Risk Identification Pre- & Post- Approval

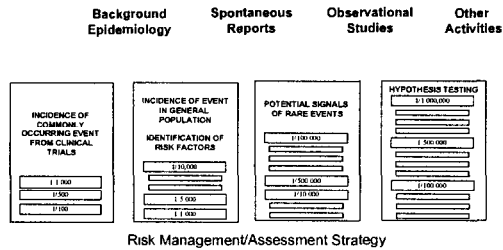
Public expectation of risk knowledge at approval is greater than reality



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Building Risk Knowledge Base

Post-approval experience allows for identification of smaller risks



Benefit & Risk: principles of risk management

Need to tie risk management tools to a formal process

- Surveillance is the responsibility of all companies
 - Onus is on manufacturer to collect complete, targeted information on adverse events
- Partnership with regulators is critical
 - Reach consensus on areas of risk, as well as plans for assessment and communication of risk
 - Agreement on the development of tools
 - Goal is to minimize surprises
- Any guidelines should be based on tested systems
 - Variations in approaches across products

Collective effort in establishing public health policy - PDUFA III

- Define the risk management 'tools' and their relative strengths & limitations
- Develop risk management plans for each new product
 - Review known epidemiology, carry out incidence & prevalence studies
 - Identify risk areas
 - Assess clinical trials limitations & disease epidemiology
 - Post-approval observational trials: confirmation of safety profile
 - Targeted post-approval clinical program: refinement of concerns
 - Spontaneous reports: rare event identification
 - What additional work needs to be done to assess risk
- Formal FDA concurrence with plan
 - Interpretation of algorithms and outputs
 - Annual re-review of scope

Industry at the Cutting Edge

- Identifying new and novel approaches
 - Automated databases
 - Rapid access to large populations
 - Support to keep valuable database resources available
 - Used by industry, regulatory agencies, and academia
 - Pregnancy Registries
 - Industry at the forefront of their development and use
 - Multi-company support of key registries (anti-epileptic & anti-viral registries)
 - Help in warning women of risks and provides input into physician counseling
- Need to ensure use of systematic approaches to managing risk for physicians, pharmacists, and nurses (cannot have multiple, complex programs to juggle)
